

## REMARKS

Claims 4 to 12 and 15 to 16 are pending in the application; new claim 16 has been added.

### **Rejection under 35 U.S.C. 103**

Claims 4-12 and 15 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Murray* (US 2002/0069937).

Examiner basically relies on the disclosure of paragraphs 0037 to 0041 of *Murray* as disclosing the present invention as claimed. Examiner states that the conveyor 14 is a variable speed conveyor and continues to feed during intervals when the rolls 18, 19, 20, 21 are stopped to buck a log or the conveyor can be coordinated with the rolls 18-21 to stop and go in conjunction. In examiner's opinion it is therefore disclosed that although the conveyor is normally run at variable speed, it can also be coordinated to stop and go with the rolls 18-21 that are processing the previously fed log. *Murray's* disclosure in regard to the conveyor normally being run at a variable speed could mean two things: the conveyor can be changed to process logs at various discrete speed, or that during a single run it is apparent that the speed of the conveyor is capable of being continuously changed. Examiner states that it is apparent from the totality of the disclosure that it is the second interpretation that *Murray* intended.

Applicant respectfully disagrees that the totality of the disclosure indicates that the speed of the conveyor would be continuously changed. The only coupling disclosed between the conveyor speed and the transport speed through the sawing station is the stop-and-go operation; no variable speed adjustment of the conveyor speed is disclosed as a function of the transport through the sawing station. Applicant would also like to submit that the disclosure of *Murray* explicitly states that the improvement in throughput with the disclosed apparatus is achieved for a system where the infeed and outfeed conveyors are operated independent of the log progress in the sawing station in that the sawing station is improved (see paragraph 0004):

“The present inventor, as disclosed in his U.S. Pat. No. 5,680,802 issued on Oct. 28, 1997, provided a log bucksawing system in which the speed of the infeed or outfeed conveyors can be

operated independently of the progress of the log at the sawing station to improve the throughput speed. The inventor has now discovered that the efficiency of the system can be improved by providing a second cut-off saw which is movable, and by making both dual cut-off saws movable.”

Thus, the throughput is improved by the sawing station and no coupling between the infeed and outfeed conveyors and the sawing station progress is envisioned for throughput improvement.

Further, the examiner states that it can be argued that a variable speed conveyor implies discrete speeds, as there are a finite number of identified predictable interpretations, it would have been obvious to one of ordinary skill in the art at the time of the invention to have presumed that the variable speed conveyor implied continuously changing speed. *Murray* does not go one step further and positively states that the variations in speed of the variable speed conveyor are also linked to the movement of the rolls and thus the processing of the previously fed log, it is apparent from the disclosure that it must be the case in order that the logs are not processed so fast that they contact each other during transport, especially as increased throughput is the desired effect.

Again, Applicant disagrees as the apparatus of *Murray* prevents the logs from contacting one another by the disclosed stop-and-go operation. No disclosure linking the progress in the sawing station to the infeed conveyor other than the stop-and-go operation is present.

Examiner argues that even though the variable feed conveyor of *Murray* does not specifically disclose that the variable feed of the conveyor is directly linked to the processing of the previous log, it would be obvious to coordinate the movement of logs such that the throughput (examiner references paragraph 0039), is maximized as desired by the applicant and also the logs are safely transported such that they do not run into each other.

Applicant respectfully disagrees. First of all the paragraph 0039 referenced by the examiner has nothing to do with adjusting or varying the transport speed of the conveyor:

“ The throughput speed of the sawing or bucking process is increased by sensing of the log diameters as the log is advanced through the system. ... linear positioner or pneumatic linear positioning system which senses the length of the stroke on the hydraulic cylinder or pneumatic cylinder which controls the arm 23 and thereby generates a signal indicative of the diameter of the log, which is also used for pre-positioning of the tilted feed roll 21 as the log moves forward. ... The log diameter information is also used to pre-position the cut-off saw 26 as well as control the stroke of the saw when the log is bucked. For example, as the diameter of the log changes, the rest position

of the cut-off saw will be moved towards or away from the log to reduce the distance the cut-off saw must swing to saw the log. The length of the stroke or swing of the cut-off saw is also determined by the measured diameter of the log so that the cut-off saw can complete its stroke and return to its start position in the minimum time, thereby maximizing throughput.”.

The log diameter is determined to preposition the roll 21 and the cut-off saw so that the processing time in the sawing station is reduced. This has nothing to do with recalculating and variably adjusting the feeding speed of the conveyor.

Applicant would also like to submit that *Murray* discloses in regard to the transport devices 14 and 24 (infeed and outfeed conveyors) in paragraph 0038 that they operated with a constant or a variable speed, normally at a variable speed. This single statement in *Murray* cannot suggest or teach the step of:

“recalculating and variably adjusting, based on the input signals of step b) and step c), the feeding velocity of the pieces of wood during transport according to step b) such that sequentially transported pieces of wood have a minimal spacing relative to one another and a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported into the sawing station while the first piece of wood is still being cut”.

During transport of the logs the transport speed remains unchanged. The only coupling between the speeds of the conveyor and the rolls that is disclosed in *Murray* is according to paragraph 0041 that conveyor and rolls are coordinated in a stop-and-go operation. The other disclosure is that feeding continues with conveyor 14 while the log is bucked and that this reduces gaps between the logs. However, this does not imply recalculating and variably adjusting the feeding velocity in the direction toward the sawing station for minimizing the spacing of the sequentially transport logs.

Nowhere in the cited references is there any mention that the conveyor 14 may be used to vary the transport speed when supplying the next log. In Figs. 1 to 3 the sequence for supplying the first log 12 is illustrated. The conveyor 14 is matched with regard to its transport speed to the transport speed of the rolls 18-21 because the log 12 rests on the conveyor 14 while also being in contact with the transport rollers 18-21 (Figs. 1 and 2). Accordingly, the conveyor 14 and the rolls 18-21 must have the same transport speed. As

soon as the log 12 has left the conveyor 14 (Fig. 3) but is still further transported by the rollers 18-21, the conveyor 14 can transport the next log. Since the log 12 by means of the circular sawblade 26 is cut into individual pieces, in the area of the sawing station the described stop-and-go operation is carried out. While this is happening, the next log is supplied by means of the conveyor 14 but with constant speed. For each log, the transport speed of the conveyor 14 may be different. However, while the log is being supplied the transport speed is not recalculated and not varied. Instead, the following log 12 by means of the conveyor 14 is transported with constant speed in the direction to the sawing station. The conveyor 14, of course, must be stopped when the following log comes close to the leading log which is engaged by the rolls 18 to 21 and is sawed by the circular sawblade 26. Since the log that is within the sawing area during sawing is transported stepwise for the next cut to be performed, the conveyor 14 is also moved by stop-and-go steps in order to advance the following log accordingly. This coupling between the transport speed of the conveyor 14 and the rollers 18-21 is the stop-and-go operation disclosed in paragraph 0041 and this is the only type of coupling suggested by *Murray*.

It is not apparent how based on the disclosure of *Murray* the examiner can arrive at the conclusion that a person skilled in the art would derive from *Murray* that the transport speed is constantly newly calculated and varied in order to minimize the spacing between the logs. The "variation" of the transport speed as disclosed in *Murray* is precisely such that a person skilled in the art cannot interpret it any other way than the stop-and-go operation presented in *Murray*.

The variation of transport speed of the conveyor 14 disclosed in *Murray* has nothing in common with what is being claimed in the instant application. In the method according to claim 15 the input signals of the scanned position of the pieces of wood are sent to the control unit (as an indication of the progress of the pieces of wood on the transport device) and also signals in regard to the saw position are sent to the control unit, indicating the progress of the leading piece of wood, and, based on this positional information, the control unit recalculates and variably adjusts the transport speed to minimize the spacing between sequentially transported workpieces. Such a method is not disclosed in the cited reference and is not suggested by it. Examiner's argument that even though the variable feed

conveyor of *Murray* does not specifically disclose that the variable feed of the conveyor is directly linked to the processing of the previous log, it would be obvious to coordinate the movement of logs such that the throughput (examiner references unrelated paragraph 0039), is maximized as desired by the applicant and also the logs are safely transported such that they do not run into each other, is a clear indication of hindsight interpretation of *Murray*.

Reconsideration and withdrawal of the rejection of the claims under 35 USC 103 are respectfully requested.

### **Claim 16**

Especially the features of new claim 16 are not disclosed in or suggested by *Murray*.

Claim 16 claims in step d) that continuously a speed of the first and second transport devices is input into the control unit, respectively and in step e) that the feeding velocity of the pieces of wood on the first transport device is continuously recalculated and variably adjusted, based on the speed of the first and second transport devices and the input signals of step b) and step c), such that sequentially transported pieces of wood have a minimal spacing relative to one another and a second piece of wood that trails immediately a first piece of wood being cut in the sawing station is already transported to the second transport device of the sawing station while the first piece of wood is still being cut. See paragraph 0030 of the instant application.

*Murray* does not disclose that the speed of the infeed conveyor and the speed of the conveyor in the sawing station are constantly input into a control unit and that based on the speed input as well as based on the other signals the feeding velocity of the pieces of wood on the first transport device is continuously recalculated and variably adjusted. The only disclosed coupling or correlation between the speed of the rollers 18-21 and the conveyor 14 is the stop-and-go operation.

Claim 16 is therefore not obvious in view of *Murray*.

### **CONCLUSION**

In view of the foregoing, it is submitted that this application is now in condition for

allowance and such allowance is respectfully solicited.

Should the Examiner have any further objections or suggestions, the undersigned would appreciate a phone call or **e-mail** from the examiner to discuss appropriate amendments to place the application into condition for allowance.

Authorization is herewith given to charge any fees or any shortages in any fees required during prosecution of this application and not paid by other means to Patent and Trademark Office deposit account 50-1199.

Respectfully submitted on April 23, 2009,

/Gudrun E. Hockett/

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